Attachment A

Lightweight Rainfall Radiometer Accommodation Assessment

Statement of Work

Lightweight Rainfall Radiometer (LRR)
Accommodation Assessment Statement of Work

1.0 Introduction

This Statement of Work (SOW) specifies the work to be performed by the contractor in support of the LRR Instrument Incubator Program (IIP) technology development effort at GSFC.

2.0 Reference Documents

The LRR descriptive information is contained in the Instrument Description Document currently hosted on the RSDO website. In addition, two PRO-Engineer solid models, an optimum science model and a minimum science model and baseline fairing information are also available at the web site.

3.0 Work to be Performed

The contractor shall define the feasibility of accommodating the lightweight rainfall radiometer on board an RSDO, or potential RSDO, spacecraft in two different launch configurations.

3.1 Background/Purpose

The lightweight rainfall radiometer is designed to measure passive microwave energy at 10.7 GHz, 37 GHz and 85 GHz. The instrument might be used as part of a constellation of sensors designed to increase the rainfall-sampling rate across the globe and launched in the late 2006 timeframe. As such, the instrument and the host spacecraft must be capable of being launched in at least two different launch configurations; a single unit mode, nominally aboard a Pegasus class launch vehicle, and 2 LRR's in a dual unit mode, nominally aboard a Taurus class launch vehicle. Current baseline orbit is 600 Km sun-synchronous with various equatorial crossing times.

3.2 Accommodation Studies

The contractor shall conduct an examination of the host satellite design(s) to define the accommodation approach for LRR as well as resources and margins. As a minimum the contractor shall:

1) Describe the spacecraft and its accommodation of LRR (as described in the LRR data supplied on the RSDO web site) for both single and dual launch configurations. This shall include the generation of a few 3D images to be used in NASA management and public presentations. As such, a set of non-proprietary images shall be provided.

2) Using the data provided on the RSDO web site, perform launch vehicle accommodation analyses including fairing fit for both of the following cases:

- How does the spacecraft accommodate the optimum science LRR in the Pegasus XL fairing?

- How would a pair of optimum science LRR's (and S/C's) be best stowed and deployed in a Taurus class SELVS II launch vehicle?

3) What spacecraft accommodation issues are there associated with the design that might be fixed by changing the instrument.

4) Identify significant technical drivers.

5) Estimate a budgetary ROM cost and schedule for accommodating the LRR under Rapid II. Estimates of cost for 2nd and 3rd units shall also be provided. Cost should be phased by US Government fiscal year.

The results of these analyses shall be documented in the final presentation materials.

Attachment B

LRR Spacecraft Accommodation Assessment

Deliverables and Price

Period of Performance, Schedule, and Deliverables

The period of performance for the study shall nominally be forty-five (45) days after receipt of order (ARO).

Study Schedule, Meetings, and Location

Date	Activity	Location	Duration
Within 7 days ARO	Kick Off Telecon	Telecon or GSFC	2 hours
Within 30 days ARO	Mid Term Status Review	Telecon or GSFC	2 hours
Approx 45 days ARO	Final Presentation	Vendor Facility	1 day
As needed	Informal Exchanges	Telecon and email	As needed

Specific dates will be mutually arranged after delivery order award.

Delivery Schedule

Date	Item	# of Copies
Final Presentation	Publicly Releasable Images (jpeg format)	8 hard copies/1 electronic
Final Presentation	Presentation Materials	8 hard copies/1 electronic

The soft copy shall be compatible with 1997 Microsoft Office or Adobe Acrobat PDF.

All Deliveries shall be made to:

Attn: Jim Adams 301/286-2508
Building 12 Room N241, Mail Code 740.2
NASA Goddard Space Flight Center
Greenbelt, MD 21114

Phone: 301/286-2508
FAX: 301/286-0232
Email: jim.adams@gsfc.nasa.gov

Price

A single payment for this effort shall be made:

Payment Event	Amount	Percent
Completion of Final Report	$49K	100%

Completion of Final Presentation: The final presentation shall, as a minimum cover all of the information required in Section 3.2 of the SOW. If the COTR finds significant errors or missing information in the final presentation he shall advise the contracting officer to withhold payment until such deficiency is corrected.